

CLAIMS

What is claimed is:

1. A composite board comprising:

5 a foam core having upper and lower surfaces, wherein said foam core is selected from the group consisting of polyisocyanurate and polyurethane and mixtures thereof; and

10 a filler material within said foam core selected from the group consisting of rubber-tire vents, EPDM scrap material, plastic chips, polyurethane scrap, polyisocyanurate scrap, scrap rubber from recycled tires, wood chips, fiberglass strands and mixtures thereof.

2. A composite board, as set forth in claim 1, wherein said foam core comprises polyisocyanurate having an iso index above 200.

- 15 3. A composite board as set forth in claim 1, further comprising a facer material applied to one of said surfaces of said filled foam core.

- 20 4. A composite board as set forth in claim 3, wherein said facer material is selected from the group consisting of polymer materials, reinforced polymer materials, reinforced cellulosic material, paper, aluminum foil and trilaminates thereof.

- 25 5. A composite board, as set forth in claim 4, wherein a facer material is applied to said other surface of said filled foam core.

6. A composite board, as set forth in claim 5, wherein a substrate material is applied to said lower surface of said filled foam core in lieu of said facer material.

- 30 7. A composite board, as set forth in claim 1, wherein a substrate material is applied to one of said surfaces of said filled foam core.

8. A method of re-roofing a roof comprising:

applying composite recovery boards to a roof deck, said recovery boards comprising

5 a foam core having upper and lower surfaces, wherein said foam core is selected from the group consisting of polyisocyanurate and polyurethane and mixtures thereof; and

10 filler material within said foam core selected from the group consisting of rubber-tire vents, EPDM scrap material, plastic chips, polyurethane scrap, polyisocyanurate scrap, scrap rubber from recycled tires, wood chips, fiberglass strands and mixtures thereof; and applying a weather protective layer over said recovery boards.

15 9. A method of re-roofing a roof, as set forth in claim 8, further comprising the step of applying a facer material to one of said surfaces of said filled foam core.

20 10. A method of re-roofing a roof, as set forth in claim 9, wherein said facer material is selected from the group consisting of polymer materials, reinforced polymer materials, reinforced cellulosic material, paper, aluminum foil and trilaminates thereof.

25 11. A method of re-roofing a roof, as set forth in claim 10, including the step of applying a second facer material to said other surface of said filled foam core.

12. A method of re-roofing a roof, as set forth in claim 8, including the step of applying a substrate material to said lower surface of said filled foam core in lieu of said facer material.

30 13. A method of re-roofing a roof, as set forth in claim 8, wherein a substrate material is applied to one of said surfaces of said filled foam core.

14. A continuous method of making a composite board comprising the steps of:

feeding a first sheet of facer material into a conveyor assembly;

depositing a filled foamable polymer liquid onto said facer;

5 feeding a second facer material into the conveyor assembly above the filled foamable polymer liquid;

allowing said filled foamable polymer liquid to rise between said facer materials in order to form filled polymer foam of a predetermined thickness;

10 curing said polymer foam under heat to create the composite board; and

cutting the composite board to desired lengths.

- 15 15. A continuous method, as set forth in claim 14, wherein said recovery boards comprise

a foam core having upper and lower surfaces, wherein said foam core is selected from the group consisting of polyisocyanurate and polyurethane and mixtures thereof; and

20 filler material within said foam core selected from the group consisting of rubber-tire vents, EPDM scrap material, plastic chips, polyurethane scrap, polyisocyanurate scrap, scrap rubber from recycled tires, wood chips, fiberglass strands and mixtures thereof.

- 25 16. A continuous, as set forth in claim 14, wherein said recovery board further comprising a facer material applied to one of said surfaces of said filled foam core.

- 30 17. A continuous, as set forth in claim 16, wherein said facer material is selected from the group consisting of polymer materials, reinforced polymer materials, reinforced cellulosic material, paper, aluminum foil and trilaminates thereof.

18. A continuous, as set forth in claim 14, wherein said recovery board further comprises a second facer material is applied to said other surface of said filled foam core.
- 5 19. A continuous, as set forth in claim 18, wherein a substrate material is applied to said lower surface of said filled foam core in lieu of said facer material.
- 10 20. A composite board, as set forth in claim 14, wherein a substrate material is applied to one of said surfaces of said filled foam core.

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